

OEPRA

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**AMERICAN ENERGY CORPORATION  
43521 MAYHUGH HILL ROAD  
BEALLSVILLE, OHIO**

**Antidegradation Social Economic Justification Update**

**Describe and provide an estimate of the important social and economic benefits to be realized through this proposed project. Include the number and types of jobs created and tax revenues Generated.**

The American Energy Corporation and The Ohio Valley Coal Company are the largest underground coal mines in the State of Ohio, which, together, directly employ approximately 1,351 persons in eastern Ohio. A study conducted by Penn State University (Rose and Frias 1994) suggested that 11 ancillary jobs are associated with every mine job. A loss of these jobs would produce a devastating social and economic impact upon these employees and the communities in which they reside.

Ohio's coal industry currently produces a total of approximately 23 million tons of coal annually, of which TOVCC and American Energy produces a total of approximately 14 million tons, or approximately 60 percent of the coal produced in Ohio. The coal from these mines is sold to mostly Ohio electric utilities, and the coal is vitally needed to fuel there base-load power plants. Coal provides 86 percent of the electricity that is generated and consumed in Ohio Furthermore, not only does coal provide for State revenues from leases, royalties, rentals, coal severance, and property taxes, but also it provides for business opportunities and employment for industries that provide the goods and services to the coal mine.

Combined, TOVCC and American Energy paid a total of \$55.5 million in Federal, State and local taxes and fees in 2008, of which it paid approximately \$13 million in just state and local taxes and fees. Additionally, the Ohio operations of MEC spend more than \$229 million annually with local vendors, suppliers, and contractors.

The American Energy Corporation tried using a filter press system at the preparation plant. The filter cake produced from the presses contained 40 to 50 percent moisture due to the presence of clays in the refuse. Clay tends to retain moisture due to its size, shape and chemical properties. Filter cake moisture must be below approximately 25 percent to provide a combined product that can be handled. Further testing confirmed that, because of the inherent physical characteristics of the slurry material generated by the MEC preparation

plants, the material cannot be sufficiently dewatered to be handled and disposed of as a solid, even when combined with coarse refuse.

Therefore, the American Energy Corporation determined that using The Ohio Valley Coal Company's No.2 impoundment was the most efficient means for slurry disposal.

American Energy Corporation will implement underground injection for slurry disposal in the future when it can be done safely. The only area where slurry could be pumped is located just east of the current main line for the mine. Sometime after 2014, mining in the southern portion of the Century Mine will be completed and at that time, the Allison workings and the Century workings will be considered for slurry injection.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.  
SEE INSTRUCTIONS.

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT <i>(if available)</i>	2. EFFLUENT		3. UNITS (specify if blank)		4. INTAKE (optional)	
	a. MAXIMUM DAILY VALUE (2) MASS CONCENTRATION	b. MAXIMUM 30 DAY VALUE ( <i>if available</i> )	c. LONG TERM AVRG. VALUE ( <i>if available</i> )	d. NO. OF ANALYSES	a. CONCENTRATION (1) MASS CONCENTRATION	b. MASS CONCENTRATION (1) MASS CONCENTRATION
a. Biochemical Oxygen Demand ( <i>BOD</i> )						b. NO. OF ANALYSES
b. Chemical Oxygen Demand ( <i>COD</i> )						
c. Total Organic Carbon ( <i>TOC</i> )						
d. Total Suspended Solids ( <i>TSS</i> )						
e. Ammonia ( <i>as N</i> )						
f. Flow	VALUE	43 , 200	VALUE	VALUE	VALUE	VALUE
g. Temperature ( <i>winter</i> )	VALUE		VALUE	VALUE	°C	VALUE
h. Temperature ( <i>summer</i> )	VALUE	26 . 1	VALUE	VALUE	1	°C
i. pH	MINIMUM 8 . 06	MAXIMUM 8 . 21	MINIMUM	MAXIMUM	STANDARD UNITS	
<b>PART B -</b> Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.						
<b>2. MARK "X"</b>						
1. POLLUTANT AND CAS NO. <i>(if available)</i>	<sup>a.</sup> BELIEVED PRESENT	<sup>b.</sup> BELOVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE ( <i>if available</i> )	c. LONG TERM AVRG. VALUE ( <i>if available</i> )	d. NO. OF ANALYSES
a. Bromide (24959-67-9)	X					
b. Chlorine, Total Residual	X					
c. Color	X					
d. Fecal Coliform	X					
e. Fluoride (16584-48-8)	X					
f. Nitrate-Nitrite (as N)	X					

## ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X" a. BELIEVED PRESENT (X)	3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
		a. MAXIMUM DAILY VALUE (1) CONCENTRATION (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION (2) MASS	c. LONG TERM AVERAGE VALUE (if available) (1) CONCENTRATION (2) MASS	d. NO. OF ANALYSES	a. CONCEN- TRATION (1) b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	b. NO. OF ANALYSES		
g. Nitrogen, Total Organic (as N)	X									
h. Oil and Grease	X									
i. Phosphorus (as P), Total (7723-14-0)	X	0 . 0 3 4								
j. Radioactivity										
(1) Alpha, Total	X									
(2) Beta, Total	X									
(3) Radium, Total	X									
(4) Radium 226, Total	X									
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		1 3 1 0							
l. Sulfide (as S)	X									
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)	X									
n. Surfactants	X									
o. Aluminum, Total (7429-90-5)	X	0 . 1 8								
p. Barium, Total (7440-39-3)	X	0 . 0 8								
q. Boron, Total (7440-42-8)	X	0 . 4 8 8								
r. Cobalt, Total (7440-48-4)	X									
s. Iron, Total (7439-89-6)	X	0 . 3 6								
t. Magnesium, Total (7439-95-4)	X									
u. Molybdenum, Total (7439-98-7)	X									
v. Manganese, Total (7439-96-5)	X	0 . 1 3 5								
w. Tin, Total (7440-31-5)	X									
x. Titanium, Total (7440-32-6)	X									

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
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CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available)	c. LONG TERM AVRG. (1) CONCENTRATION	d. NO. OF ANALYSES (2) MASS CONCENTRATION	a. CONCEN- TRATION (1) MASS
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>								
1M. Antimony, Total (7440-36-0)		X						
2M. Arsenic, Total (7440-38-2)		X		0.0009				1 mg/L lbs.
3M. Beryllium, Total (7440-41-7)		X						
4M. Cadmium, Total (7440-43-9)		X		0.015				1 mg/L lbs.
5M. Chromium Total (7440-47-3)		X		0.02				1 mg/L lbs.
6M. Copper, Total (7440-50-8)		X						
7M. Lead, Total (7439-92-1)		X						
8M. Mercury, Total (7439-97-6)		X		2.27				1 mg/L lbs.
9M. Nickel, Total (7440-02-0)		X		0.02				1 mg/L lbs.
10M. Selenium, Total (7732-49-2)		X		0.0009				1 mg/L lbs.
11M. Silver, Total (7440-22-4)		X						
12M. Thallium, Total (7440-28-0)		X						
13M. Zinc, Total (7440-66-6)		X		0.015				1 mg/L lbs.
14M. Cyanide, Total (57-12-5)		X						
15M. Phenols, Total		X						
DIOXIN								
2,3,7,8-Tetra- chlorodibenzo-P- Dioxin (1764-01-6)								
DESCRIBE RESULTS								

## CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	a. TESTING REQUIRED	2. MARK "X"		3. EFFLUENT		5. INTAKE <i>(optional)</i>		
		b. BELOWED PRESENT	c. BELOWED ABSENT	a. MAXIMUM DAILY VALUE ( <sup>1</sup> )	b. MAXIMUM 30 DAY VALUE ( <i>if available</i> )	c. LONG TERM AVRG. VALUE <i>(if available)</i>	d. NO. OF ANALYSES ( <sup>1</sup> )	
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>								
1V. Acrolein (107-02-8)		X						
2V. Acrylonitrile (107-13-1)		X						
3V. Benzene (71-43-2)		X						
4V. Bis ( <i>Chloro-</i> <i>methyl</i> ) Ether (542-88-1)		X						
5V. Bromoform (75-25-2)		X						
6V. Carbon Tetrachloride (56-23-5)		X						
7V. Chlorobenzene (108-90-7)		X						
8V. Chlorodi- bromomethane (124-48-1)		X						
9V. Chloroethane (75-00-3)		X						
10V. 2-Chloro- ethyl(vinyl Ether (110-75-8)		X						
11V. Chloroform (67-66-3)		X						
12V. Dichloro- bromomethane (75-27-4)		X						
13V. Dichloro- difluoromethane (75-71-8)		X						
14V. 1,1-Dichloro- ethane (75-34-3)		X						
15V. 1,2-Dichloro- ethane (107-06-2)		X						
16V. 1,1-Dichloro- ethylene (75-35-4)		X						
17V. 1,2-Dichloro- propane (78-87-5)		X						
18V. 1,3-Dichloro- propylene (542-75-6)		X						
19V. Ethylbenzene (100-41-4)		X						
20V. Methyl Bromide (74-83-9)		X						
21V. Methyl Chloride (74-87-3)		X						

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT			4. UNITS			5. INTAKE <i>(optional)</i>		
	a. TESTING REQUIRED	b. BELOWED PRESENT	c. BELOWED ABSENT	a. MAXIMUM DAILY VALUE	b. MAXIMUM 30 DAY VALUE <i>(if available)</i>	c. LONG TERM AVRG. VALUE <i>(if available)</i>	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	a. CONCEN- TRATION	b. MASS
<b>GC/MS FRACTION - VOLATILE COMPOUNDS <i>(continued)</i></b>												
22V Methylene Chloride (75-09-2)			X									
23V 1,1,2,2-Tetrachloroethane (79-34-5)			X									
24V Tetrachloro-ethylene (127-18-4)			X									
25V Toluene (108-88-3)			X									
26V 1,2-Trans-Dichloroethylene (156-60-5)			X									
27V 1,1,1-Trichloro-ethane (71-55-6)			X									
28V 1,1,2-Trichloro-ethane (79-00-5)			X									
29V Trichloro-ethylene (79-01-6)			X									
30V Trichlorofluoromethane (75-69-4)			X									
31V Vinyl Chloride (75-01-4)			X									
<b>GC/MS FRACTION - ACID COMPOUNDS</b>												
1A 2-Chlorophenol (95-57-8)			X									
2A 2,4-Dichlorophenol (120-83-2)			X									
3A 2,4-Dimethylphenol (105-67-9)			X									
4A 4,6-Dinitro-O-Cresol (534-52-1)			X									
5A 2,4-Dinitrophenol (51-28-5)			X									
6A 2-Nitrophenol (88-75-5)			X									
7A 4-Nitrophenol (100-02-7)			X									
8A P-Chloro-M-Cresol (59-50-7)			X									
9A Pentachlorophenol (87-86-5)			X									
10A Phenol (108-95-2)			X									
11A 2,4,6-Trichlorophenol (88-05-2)			X									

## CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"	3. EFFLUENT			4. UNITS			5. INTAKE <i>(optional)</i>				
		a. TESTING REQUIRED	b. PRESENT	c. BELOVED ABSENT	a. MAXIMUM DAILY VALUE <i>(if available)</i>	b. MAXIMUM 30 DAY VALUE <i>(if available)</i>	c. LONG TERM AVERAGE VALUE <i>(if available)</i>	d. NO. OF ANALYSES	a. CONCEN- TRATION <sup>(1)</sup> (2) MASS CONCENTRATION	b. MASS <sup>(1)</sup> (2) MASS CONCENTRATION	a. LONG TERM AVERAGE VALUE <sup>(1)</sup> (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS												
1B Acenaphthene (83-32-9)	X											
2B Acenaphthylene (208-96-8)		X										
3B Anthracene (120-12-7)		X										
4B Benzidine (92-87-5)		X										
5B Benzo <i>(a)</i> Anthracene (56-55-3)		X										
6B Benzo <i>(a)</i> Pyrene (50-32-8)		X										
7B 3,4-Benzo- fluoranthene (205-99-2)		X										
8B Benzo <i>(i)</i> Perylene (191-24-2)		X										
9B Benzo <i>(k)</i> Fluoranthene (207-08-9)		X										
10B Bis <i>(2-Chloro- ethoxy)</i> Methane (111-91-1)		X										
11B Bis <i>(2-Chloro- ethoxy)</i> Ether (111-44-4)		X										
12B Bis <i>(2- Chlorosopropyl)</i> Ether (102-80-1)		X										
13B Bis <i>(2-Ethyl- hexyl)</i> Phthalate (117-81-7)		X										
14B 4-Bromophenyl Phenyl Ether (101-55-3)		X										
15B Butyl Benzyl Phthalate (85-68-7)		X										
16B 2-Chloro- naphthalene (91-58-7)		X										
17B 4-Chloro- phenyl Phenyl Ether (7005-72-3)		X										
18B Chrysene (218-01-9)		X										
19B Dibenzo <i>(a,h)</i> Anthracene (53-70-3)		X										
20B 1,2-Dichloro- benzene (95-50-1)		X										
21B 1,3-Dichloro- benzene (641-73-1)		X										

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELOVED PRESENT	c. BELOVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available)	c. LONG TERM AVRG. VALUE (if available)	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	b. MASS	a. NO. OF ANALYSES	b. NO. OF ANALYSES
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)</b>												
22B. 1,4-Dichloro- benzene (106-46-7)		X	X									
23B. 3,3-Dichloro- benzidine (91-94-1)		X	X									
24B. Diethyl Phthalate (84-66-2)		X	X									
25B. Dimethyl Phthalate (131-11-3)		X	X									
26B. Di-N-Butyl Phthalate (84-74-2)		X	X									
27B. 2,4-Dinitro- toluene (121-14-2)		X	X									
28B. 2,6-Dinitro- toluene (606-20-2)		X	X									
29B. Di-N-Octyl Phthalate (117-84-0)		X	X									
30B. 1,2-Diphenyl- hydrazine (as Azo- benzene) (122-66-7)		X	X									
31B. Fluoranthene (206-44-0)		X	X									
32B. Fluorene (86-73-7)		X	X									
33B. Hexachloro- benzene (118-74-1)		X	X									
34B. Hexachloro- butadiene (87-68-3)		X	X									
35B. Hexachloro- cyclopentadiene (17-47-4)		X	X									
36B. Hexachloro- ethane (67-72-1)		X	X									
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)		X	X									
38B. Isophorone (78-59-1)		X	X									
39B. Naphthalene (91-20-3)		X	X									
40B. Nitrobenzene (98-95-3)		X	X									
41B. N-Nitroso- sodimethylamine (62-75-9)		X	X									
42B. N-Nitrosodi- N-Propylamine (621-64-7)		X	X									

## CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"	3. EFFLUENT			4. UNITS			5. INTAKE (optional)				
		a TESTING REQUIRED	b BELIEVED PRESENT	c BELIEVED ABSENT	a. MAXIMUM DAILY VALUE ( <sup>1</sup> ) CONCENTRATION	b. MAXIMUM 30 DAY VALUE ( <i>if available</i> ) ( <sup>1</sup> ) CONCENTRATION	c. LONG TERM AVERG. VALUE ( <i>if available</i> ) ( <sup>1</sup> ) CONCENTRATION	d. NO. OF ANALYSES	a. CONCEN- TRATION ( <sup>1</sup> ) MASS	b. MASS CONCENTRATION ( <sup>1</sup> ) MASS	a. LONG TERM AVERAGE VALUE ( <sup>1</sup> ) MASS	b. NO. OF ANALYSES
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)</b>												
43B N-Nitro- sodiphenylamine (86-30-6)			X									
44B Phenanthrene (85-01-8)			X									
45B Pyrene (129-00-0)			X									
46B 1,2,4-Tri- chlorobenzene (1120-82-1)			X									
<b>GC/MS FRACTION - PESTICIDES</b>												
1P Aldrin (309-00-2)												
2P $\alpha$ -BHC (319-84-6)												
3P $\beta$ -BHC (319-85-7)												
4P $\gamma$ -BHC (58-89-9)												
5P $\delta$ -BHC (319-86-8)												
6P Chlordane (57-74-9)												
7P 4,4'-DDT (50-29-3)												
8P 4,4'-DDE (72-55-9)												
9P 4,4'-DDD (72-54-8)												
10P Dieldrin (60-57-1)												
11P $\alpha$ -Endosulfan (115-29-7)												
12P $\beta$ -Endosulfan (115-29-7)												
13P Endosulfan Sulfate (1031-07-8)												
14P Endrin (72-20-8)												
15P Endrin Aldehyde (7421-93-4)												
16P Heptachlor (76-44-8)												

CONTINUED FROM PAGE V-8	EPA I.D. NUMBER (copy from Item 1 of Form I)	OUTFALL NUMBER
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1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT			4. UNITS			5. INTAKE <i>(optional)</i>				
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE <i>(if available)</i>	b. MAXIMUM 30 DAY VALUE <i>(if available)</i>	c. LONG TERM AVRG. VALUE <i>(if available)</i>	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE <i>(1)</i> <i>(2)</i> MASS	b. NO. OF ANALYSES
<b>GC/MS FRACTION - PESTICIDES <i>(continued)</i></b>														
17P Heptachlor Epoxyde (1024-57-3)														
18P PCB-1242 (53469-21-9)														
19P PCB-1254 (11097-69-1)														
20P PCB-1221 (11104-28-2)														
21P PCB-1232 (11141-16-5)														
22P PCB-1248 (12672-29-6)														
23P PCB-1260 (11096-82-5)														
24P PCB-1016 (12674-11-2)														
25P Toxaphene (8001-35-2)														



**PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY.** You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.

EPA I.D. NUMBER (copy from Item 1 of Form 1)

**INITIATE AND ESTABLISH CHARACTERISTICS** (continued from page 3 of Form 2-C)

1. POLLUTANT		2. EFFLUENT		3. UNITS (specify if blank)		4. INTAKE (optional)	
		a. MAXIMUM DAILY VALUE ( <i>if available</i> )	b. MAXIMUM 30 DAY VALUE ( <i>if available</i> )	c. LONG TERM AVERAGE VALUE ( <i>if available</i> )	d. NO. OF ANALYSES	a. CONCENTRATION ( <sup>(1)</sup> )	a. LONG TERM AVERAGE VALUE
		(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	b. MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand ( <i>BOD</i> )							
b. Chemical Oxygen Demand ( <i>COD</i> )							
c. Total Organic Carbon ( <i>TOC</i> )							
d. Total Suspended Solids ( <i>TSS</i> )							
e. Ammonia ( <i>N<sub>N</sub></i> )							
f. Flow	VALUE	102 , 500	VALUE	VALUE	VALUE	VALUE	VALUE
g. Temperature ( <i>winter</i> )	VALUE	27 . 5	VALUE	VALUE	°C	VALUE	VALUE
h. Temperature ( <i>summer</i> )	VALUE	8 . 21	MAXIMUM 8 . 61	MINIMUM MAXIMUM	1	°C	VALUE
i. pH							
2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE ( <i>optional</i> )	
1. POLLUTANT AND CAS NO. ( <i>if available</i> )		a. MAXIMUM DAILY VALUE  b. BELIEVED ABSENT	b. MAXIMUM 30 DAY VALUE  c. LONG TERM AVERAGE VALUE ( <i>if available</i> )	c. LONG TERM AVERAGE VALUE ( <i>if available</i> )	d. NO. OF ANALYSES	a. CONCENTRATION ( <sup>(1)</sup> )	a. LONG TERM AVERAGE VALUE
		(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	b. MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X						
b. Chlorine, Total Residual	X						
c. Color	X						
d. Fecal Caliform	X						
e. Fluoride (16984-48-8)	X						
f. Nitrate-Nitrite (as N)	X						

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

EPA Form 3510-2C (8-90)

PAGE V-1

**Ohio Environmental Protection Agency  
Southeast District**

## ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"	3. EFFLUENT						4. UNITS						5. INTAKE (optional)	
		a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE ( <sup>1</sup> ) CONCENTRATION ( <sup>2</sup> ) MASS	b. MAXIMUM 30 DAY VALUE ( <sup>1</sup> ) CONCENTRATION ( <sup>2</sup> ) MASS	c. LONG TERM AVRG. VALUE ( <sup>1</sup> ) CONCENTRATION ( <sup>2</sup> ) MASS	d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. CONCEN-TRATION	b. MASS	( <sup>1</sup> ) CONCENTRATION ( <sup>2</sup> ) MASS	a. LONG TERM AVERAGE VALUE ( <sup>1</sup> ) CONCENTRATION ( <sup>2</sup> ) MASS	b. NO. OF ANALYSES	
g. Nitrogen, Total Organic (as N)	X														
h. Oil and Grease	X														
i. Phosphorus (as P), Total (7723-14-0)	X	0 . 052						1	mg/L	1 lbs.					
j. Radioactivity															
(1) Alpha, Total	X														
(2) Beta, Total	X														
(3) Radium, Total	X														
(4) Radium 226, Total	X														
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X	4 . 730						1	mg/L	1 lbs.					
l. Sulfide (as S)	X														
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)	X														
n. Surfactants	X														
o. Aluminum, Total (7429-90-5)	X	1 . 35						1	mg/L	1 lbs.					
p. Barium, Total (7440-39-3)	X	0 . 05						1	mg/L	1 lbs.					
q. Boron, Total (7440-42-8)	X	0 . 720						1	mg/L	1 lbs.					
r. Cobalt, Total (7440-48-4)	X														
s. Iron, Total (7439-89-6)	X	0 . 26						1	mg/L	1 lbs.					
t. Magnesium, Total (7439-95-4)	X														
u. Molybdenum, Total (7439-98-7)	X														
v. Manganese, Total (7439-96-5)	X	0 . 38						1	mg/L	1 lbs.					
w. Tin, Total (7440-31-5)	X														
x. Titanium, Total (7440-32-6)	X														

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
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CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, non/process wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you know or have reason to believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must provide the results of at least one analysis for each pollutant which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis for each pollutant or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE ( <sup>1</sup> ) CONCENTRATION	b. MAXIMUM 30 DAY VALUE ( <i>if available</i> )	c. LONG TERM AVRG. VALUE ( <i>if available</i> )	d. NO. OF ANALYSES	a. CONCENTRATION ( <sup>1</sup> ) MASS CONCENTRATION	b. MASS CONCENTRATION	a. LONG TERM AVERAGE VALUE	b. NO. OF ANALYSES	
METALS, CYANIDE, AND TOTAL PHENOLS												
1M. Antimony, Total (7440-36-0)	X											
2M. Arsenic, Total (7440-38-2)	X			0 . 0 0 1 0						mg/L	lbs.	
3M. Beryllium, Total (7440-41-7)	X											
4M. Cadmium, Total (7440-43-9)	X			0 . 6						mg/L	lbs.	
5M. Chromium, Total (7440-47-3)	X			0 . 0 3 2						mg/L	lbs.	
6M. Copper, Total (7440-50-8)	X											
7M. Lead, Total (7439-92-1)	X			0 . 0 1 6						mg/L	lbs.	
8M. Mercury, Total (7439-97-6)	X											
9M. Nickel, Total (7440-02-0)	X											
10M. Selenium, Total (7782-49-2)	X			0 . 0 0 0 9								
11M. Silver, Total (7440-22-4)	X											
12M. Thallium, Total (7440-28-0)	X											
13M. Zinc, Total (7440-66-6)	X											
14M. Cyanide, Total (57-12-5)	X											
15M. Phenols, Total	X											
DIOXIN												
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X									
DESCRIBE RESULTS												

## CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT			4. UNITS		5. INTAKE (optional)	
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available)	d. NO. OF ANALYSES	a. CONCEN- TRATION (1) MASS CONCENTRATION	b. MASS CONCENTRATION (2) MASS
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>									
1V. Acrolein (107-02-8)		X							
2V. Acrylonitrile (107-13-1)		X							
3V. Benzene (71-43-2)		X							
4V. Bis (Chloro- methyl) Ether (542-88-1)		X							
5V. Bromoform (75-25-2)		X							
6V. Carbon Tetrachloride (56-23-5)		X							
7V. Chlorobenzene (108-90-7)		X							
8V. Chlorodi- bromomethane (124-48-1)		X							
9V. Chloroethane (75-00-3)		X							
10V. 2-Chloro- ethylvinyl Ether (110-75-8)		X							
11V. Chloroform (67-66-3)		X							
12V. Dichloro- bromomethane (75-27-4)		X							
13V. Dichloro- difluoromethane (75-71-8)		X							
14V. 1,1-Dichloro- ethane (75-34-3)		X							
15V. 1,2-Dichloro- ethane (107-06-2)		X							
16V. 1,1-Dichloro- ethylene (15-35-4)		X							
17V. 1,2-Dichloro- propane (78-87-5)		X							
18V. 1,3-Dichloro- propylene (542-75-6)		X							
19V. Ethylbenzene (100-41-4)		X							
20V. Methyl Bromide (74-83-9)		X							
21V. Methyl Chloride (74-87-3)		X							

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	a. TESTING REQUIRED	b. BELOWED PRESENT	c. BELOWED ABSENT	3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
				a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS
<b>GC/MS FRACTION - VOLATILE COMPOUNDS (continued)</b>												
22V. Methane Chloride (75-09-2)			X									
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X									
24V. Tetrachloro- ethylene (127-18-4)			X									
25V. Toluene (108-88-3)			X									
26V. 1,2-Trans- Dichloroethylene (156-60-5)			X									
27V. 1,1,1-Trichloro- ethane (71-55-6)			X									
28V. 1,1,2-Trichloro- ethane (79-00-5)			X									
29V. Trichloro- ethylene (79-01-6)			X									
30V. Trichloro- fluoromethane (75-69-4)			X									
31V. Vinyl Chloride (75-01-4)			X									
<b>GC/MS FRACTION - ACID COMPOUNDS</b>												
1A. 2-Chlorophenol (95-57-8)				X								
2A. 2,4-Dichloro- phenol (120-83-2)				X								
3A. 2,4-Dimethyl- phenol (105-67-9)				X								
4A. 4,6-Dinitro-O- Cresol (534-52-1)				X								
5A. 2,4-Dinitro- phenol (51-28-5)				X								
6A. 2-Nitrophenol (88-75-5)				X								
7A. 4-Nitrophenol (100-02-7)				X								
8A. P-Chloro-M- Cresol (59-50-7)				X								
9A. Pentachloro- phenol (87-96-5)				X								
10A. Phenol (108-95-2)				X								
11A. 2,4,6-Trichloro- phenol (88-05-2)				X								

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	a. TESTING REQUIRED	b. BELOW PRESENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available)	c. LONG TERM AVRG. VALUE (if available)	a. CONCEN- TRATION	d. NO. OF ANALYSES	a. LONG TERM AVERAGE VALUE
			(2) MASS	(1) MASS	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION
<b>G/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>								
1B. Acenaphthene (83-32-9)			X					
12B. Acenaphtylene (203-96-8)			X					
3B. Anthracene (120-12-7)			X					
4B. Benzidine (92-87-5)			X					
5B. Benzo ( <i>u</i> ) Anthracene (56-55-3)			X					
6B. Benzo ( <i>u</i> ) Pyrene (50-32-8)			X					
7B. 3,4-Benzo- fluoranthene (205-99-2)			X					
8B. Benzo ( <i>g,h,i</i> ) Perylene (191-24-2)			X					
9B. Benzo ( <i>k</i> ) Fluoranthene (2017-08-9)			X					
10B. Bis (2-Chloro- <i>ethoxy</i> ) Methane (111-91-1)			X					
11B. Bis (2-Chloro- <i>ethyl</i> ) Ether (111-44-4)			X					
12B. Bis (2- <i>Chloroisopropyl</i> ) Ether (102-80-1)			X					
13B. Bis (2-Ethyl- <i>hexyl</i> ) Phthalate (111-81-7)			X					
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X					
15B. Butyl Benzyl Phthalate (85-68-7)			X					
16B. 2-Chloro- naphthalene (91-58-7)			X					
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)			X					
18B. Chrysene (218-01-9)			X					
19B. Dibenzo ( <i>a,h</i> ) Anthracene (53-70-3)			X					
20B. 1,2-Dichloro- benzene (95-50-1)			X					
21B. 1,3-Di-chloro- benzene (541-73-1)			X					

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE ( <sup>1</sup> ) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (if available) ( <sup>1</sup> ) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (if available) ( <sup>1</sup> ) CONCENTRATION	(2) MASS	a. LONG TERM AVERAGE VALUE ( <sup>1</sup> ) CONCENTRATION	b. NO. OF ANALYSES ( <sup>2</sup> ) MASS
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)</b>											
22B. 1,4-Dichloro-benzene (106-46-7)		X									
23B. 3,3-Dichloro-benzidine (91-94-1)		X									
24B. Diethyl Phthalate (84-66-2)		X									
25B. Dimethyl Phthalate (131-11-3)		X									
26B. Di-N-Butyl Phthalate (84-74-2)		X									
27B. 2,4-Dinitro-toluene (121-14-2)		X									
28B. 2,6-Dinitro-toluene (606-20-2)		X									
29B. Di-N-Octyl Phthalate (117-84-0)		X									
30B. 1,2-Diphenyl-hydrazine (as Azo-benzene) (122-66-7)		X									
31B. Fluoranthene (206-44-0)		X									
32B. Fluorene (86-73-7)		X									
33B. Hexachloro-benzene (118-74-1)		X									
34B. Hexachloro-butadiene (87-68-3)		X									
35B. Hexachloro-cyclopentadiene (77-47-4)		X									
36B. Hexachloro-ethane (67-72-1)		X									
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)		X									
38B. Isophorone (78-59-1)		X									
39B. Napthalene (91-20-3)		X									
40B. Nitrobenzene (98-95-3)		X									
41B. N-Nitrosodimethylamine (62-75-9)		X									
42B. N-Nitrosodi-N-Propylamine (621-64-7)		X									

## CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	d. NO. OF ANALYSES (1) MASS CONCENTRATION	e. CONCEN- TRATION (2) MASS CONCENTRATION	f. MASS CONCENTRATION (2) MASS CONCENTRATION	a. LONG TERM AVERAGE VALUE (1) MASS CONCENTRATION	b. NO. OF ANALYSES (2) MASS CONCENTRATION	
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)</b>												
43B N-Nitro-sodiphenylamine (86-30-6)			X									
44B Phenanthrene (85-01-8)			X									
45B Pyrene (129-00-0)			X									
46B 1,2,4-Tri-chlorobenzene (120-82-1)			X									
<b>GC/MS FRACTION - PESTICIDES</b>												
1P Aldrin (309-00-2)												
2P $\alpha$ -BHC (319-84-6)												
3P $\beta$ -BHC (319-85-7)												
4P $\gamma$ -BHC (58-89-9)												
5P $\delta$ -BHC (319-86-8)												
6P Chlordane (57-74-9)												
7P 4,4'-DDT (50-29-3)												
8P 4,4'-DDE (72-55-9)												
9P 4,4'-DDD (72-54-8)												
10P Dieldrin (60-57-1)												
11P $\alpha$ -Endosulfan (115-29-7)												
12P $\beta$ -Endosulfan (115-29-7)												
13P Endosulfan Sulfate (1031-07-8)												
14P Endrin (72-20-8)												
15P Endrin Aldehyde (7421-93-4)												
16P Heptachlor (76-44-8)												

CONTINUED FROM PAGE V-8	EPA I.D. NUMBER ( <i>copy from Item 1 of Form I</i> )	OUTFALL NUMBER
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1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT			4. UNITS			5. INTAKE <i>(optional)</i>		
	<sup>a</sup> TESTING REQUIRED	<sup>b</sup> BELIEVED PRESENT	<sup>c</sup> BELIEVED ABSENT	a. MAXIMUM DAILY VALUE <i>(if available)</i>	b. MAXIMUM 30 DAY VALUE <i>(if available)</i>	c. LONG TERM AVRG. VALUE <i>(if available)</i>	d. NO. OF ANALYSES <sup>(1)</sup>	e. CONCEN- TRATION <sup>(1)</sup> (2) MASS	f. NO. OF ANALYSES <sup>(1)</sup> (2) MASS	g. CONCEN- TRATION <sup>(1)</sup> (2) MASS	h. NO. OF ANALYSES <sup>(1)</sup> (2) MASS	i. LONG TERM AVERAGE VALUE <sup>a</sup> <sup>b</sup> <i>b. NO. OF ANALYSES</i>
<b>GC/MS FRACTION - PESTICIDES <i>(continued)</i></b>												
17P Hepachlor Epoxyde (1024-57-3)												
18P PCB-1242 (53469-21-9)												
19P PCB-1254 (111097-69-1)												
20P PCB-1221 (11104-28-2)												
21P PCB-1232 (11141-16-5)												
22P PCB-1248 (12672-29-6)												
23P PCB-1260 (11096-82-5)												
24P PCB-1016 (12674-11-2)												
25P Toxaphene (8001-35-2)												



PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.

EPA I.D. NUMBER (copy from Item 1 of Form I)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE (if available)	b. MAXIMUM 30 DAY VALUE (if available)	c. LONG TERM AVRG. VALUE (if available)	d. NO. OF ANALYSES	a. CONCENTRATION ( <sup>1</sup> )	b. MASS ( <sup>1</sup> )	a. LONG TERM AVG. VALUE	b. NO. OF ANALYSES	a. CONCENTRATION ( <sup>1</sup> )	b. MASS ( <sup>1</sup> )	a. LONG TERM AVG. VALUE	b. NO. OF ANALYSES
1. POLLUTANT	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS
a. Biochemical Oxygen Demand (BOD <sub>5</sub> )												
b. Chemical Oxygen Demand (COD)												
c. Total Organic Carbon (TOC)												
d. Total Suspended Solids (TSS)												
e. Ammonia ( <i>as N</i> )												
f. Flow	VALUE	52,000	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE
g. Temperature (winter)	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE	VALUE
h. Temperature (summer)	VALUE	26.1	VALUE	VALUE	1	°C	°C	VALUE	VALUE	VALUE	VALUE	VALUE
i. pH	MINIMUM 7.95	MAXIMUM 8.48	MINIMUM	MAXIMUM	STANDARD UNITS							
2. MARK "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.												
3. EFFLUENT												
1. POLLUTANT AND CAS NO. (if available)	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE ( <sup>1</sup> )	b. MAXIMUM 30 DAY VALUE ( <sup>1</sup> )	c. LONG TERM AVRG. VALUE (if available)	d. NO. OF ANALYSES	a. CONCENTRATION ( <sup>1</sup> )	b. MASS ( <sup>1</sup> )	a. CONCENTRATION ( <sup>1</sup> )	b. MASS ( <sup>1</sup> )	a. LONG TERM AVERAGE VALUE	b. NO. OF ANALYSES
a. Bromide (2495-67-9)	X	X										
b. Chlorine, Total Residual	X	X										
c. Color	X	X										
d. Fecal Coliform	X	X										
e. Fluoride (1684-48-8)	X	X										
f. Nitrate-Nitrite (as N)	X	.150				1	mg/L	1 lbs.				

## ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"	3. EFFLUENT						4. UNITS						5. INTAKE (if available)	
		a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE ( <sup>1</sup> )	b. MAXIMUM 30 DAY VALUE ( <i>if available</i> )	c. LONG TERM AVRG. VALUE ( <sup>1</sup> )	d. NO. OF ANALYSES	a. CONCENTRATION ( <sup>1</sup> )	b. MASS CONCENTRATION ( <sup>1</sup> )	a. LONG TERM AVERAGE VALUE	b. NO. OF ANALYSES				
g. Nitrogen, Total Organic ( <i>as N</i> )	X														
h. Oil and Grease	X														
i. Phosphorus (as P), Total (7723-14-0)	X		0 . 0 4 4							1	mg/L	1 lbs.			
j. Radioactivity															
(1) Alpha, Total	X														
(2) Beta, Total	X														
(3) Radium, Total	X														
(4) Radium 226, Total	X														
k. Sulfate ( <i>as SO<sub>4</sub></i> ) (14808-79-8)	X		8 3 . 1							1	mg/L	1 lbs.			
l. Sulfide ( <i>as S</i> )	X														
m. Sulfite ( <i>as SO<sub>3</sub></i> ) (14265-45-3)	X														
n. Surfactants	X														
o. Aluminum, Total (7429-90-5)	X		0 . 3 9							1	mg/L	1 lbs.			
p. Barium, Total (7440-39-3)	X		0 . 0 9							1	mg/L	1 lbs.			
q. Boron, Total (7440-42-8)	X		0 . 6 2 0							1	mg/L	1 lbs.			
r. Cobalt, Total (7440-48-4)	X														
s. Iron, Total (7439-89-6)	X		0 . 3 7							1	mg/L	1 lbs.			
t. Magnesium, Total (7439-95-4)	X														
u. Molybdenum, Total (7439-98-7)	X														
v. Manganese, Total (7439-96-5)	X		0 . 5 0							1	mg/L	1 lbs.			
w. Tin, Total (7440-31-5)	X														
x. Titanium, Total (7440-32-6)	X														

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
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CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and nonequired GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1 POLLUTANT AND CAS NUMBER (if available)	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
				a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MASS (2) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	d. NO. OF ANALYSES (2) MASS CONCENTRATION	e. a. CONCEN-TRATION (1) MASS	f. b. MASS CONCENTRATION (2) MASS	g. a. LONG TERM AVERAGE VALUE (1) MASS	h. b. NO. OF ANALYSES (2) MASS	i. b. NO. OF ANALYSES (2) MASS
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>												
1M. Antimony, Total (7440-36-0)		X										
2M. Arsenic, Total (7440-38-2)		X		0 . 0 0 1 6				1	mg/L	1bs.		
3M. Beryllium, Total (7440-41-7)			X									
4M. Cadmium, Total (7440-43-9)		X		0 . 0 4				1	mg/L	1bs.		
5M. Chromium, Total (7440-47-3)		X		0 . 0 1 8				1	mg/L	1bs.		
6M. Copper, Total (7440-50-8)			X									
7M. Lead, Total (7439-92-1)		X										
8M. Mercury, Total (7439-97-6)		X		2 . 3 9								
9M. Nickel, Total (7440-02-0)			X									
10M. Selenium, Total (7732-49-2)		X		0 . 0 0 0 7				1	mg/L	1bs.		
11M. Silver, Total (7440-22-4)			X									
12M. Thallium, Total (7440-28-0)			X									
13M. Zinc, Total (7440-66-6)		X		0 . 0 0 2				1	mg/L	1bs.		
DIOXIN												
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (11764-01-6)			X									
<b>DESCRIBE RESULTS</b>												

## CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
				a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available)	d. NO. OF ANALYSES	a. CONCEN- TRATION (1) CONCENTRATION	b. MASS CONCENTRATION (2) MASS	a. LONG TERM AVERAGE VALUE (1) MASS CONCENTRATION	b. NO. OF ANALYSES
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>											
1V Acrolein (107-02-8)			X								
2V Acrylonitrile (107-13-1)			X								
3V Benzene (71-43-2)			X								
4V Bis (Chloro- methyl) Ether (542-88-1)			X								
5V Bromoform (75-25-2)			X								
6V Carbon Tetrachloride (56-23-5)			X								
7V Chlorobenzene (108-90-7)			X								
8V Chlorodi- bromomethane (124-48-1)			X								
9V Chloroethane (75-00-3)			X								
10V 2-Chloro- ethylvinyl Ether (110-75-8)			X								
11V Chloroform (67-66-3)			X								
12V Dichloro- bromomethane (75-27-4)			X								
13V Dichloro- difluoromethane (75-71-8)			X								
14V 1,1-Dichloro- ethane (75-34-3)			X								
15V 1,2-Dichloro- ethane (107-06-2)			X								
16V 1,1-Dichloro- ethylene (75-35-4)			X								
17V 1,2-Dichloro- propane (78-87-5)			X								
18V 1,3-Dichloro- propylene (542-75-6)			X								
19V Ethylbenzene (100-41-4)			X								
20V Methyl Bromide (74-83-9)			X								
21V Methyl Chloride (74-87-3)			X								

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"	3. EFFLUENT			5. INTAKE <i>(optional)</i>		
		a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE <i>(if available)</i>	b. MAXIMUM 30 DAY VALUE <i>(if available)</i>	c. LONG TERM AVRG. VALUE <i>(if available)</i>
GC/MS FRACTION - VOLATILE COMPOUNDS <i>(continued)</i>							
22V. Methylene Chloride (75-09-2)	X						
23V. 1,1,2-Tetrachloroethane (79-34-5)		X					
24V. Tetrachloroethylene (127-18-4)		X					
25V. Toluene (108-88-3)		X					
26V. 1,2-Dichloroethylene (156-60-5)		X					
27V. 1,1,1-Trichloroethane (71-55-6)		X					
28V. 1,1,2-Trichloroethane (79-00-5)		X					
29V. Trichloroethylene (79-01-6)		X					
30V. Trichlorofluoromethane (75-69-4)		X					
31V. Vinyl Chloride (75-01-4)		X					
GC/MS FRACTION - ACID COMPOUNDS							
1A. 2-Chlorophenol (95-57-8)		X					
2A. 2,4-Dichlorophenol (120-83-2)		X					
3A. 2,4-Dimethylphenol (105-67-9)		X					
4A. 4,6-Dinitro-O-Cresol (534-52-1)		X					
5A. 2,4-Dinitrophenol (51-28-5)		X					
6A. 2-Nitrophenol (88-75-5)		X					
7A. 4-Nitrophenol (100-02-7)		X					
8A. P-Chloro-M-Cresol (59-50-7)		X					
9A. Pentachlorophenol (87-86-5)		X					
10A. Phenol (108-95-2)		X					
11A. 2,4,6-Trichlorophenol (88-05-2)		X					

## CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT			4. UNITS			5. INTAKE ( <i>optional</i> )			
	a TESTING REQUIRED	b PRESENT	c BELIEVED ABSENT	a MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS CONCENTRATION	b MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS CONCENTRATION	c LONG TERM AVRG. VALUE <i>(if available)</i>	d NO. OF ANALYSES	a CONCEN- TRATION	b MASS CONCENTRATION	a LONG TERM AVVERAGE VALUE (1) CONCENTRATION
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>												
1B. Acenaphthene (83-32-9)			X									
2B. Acenaphthylene (208-96-8)			X									
3B. Anthracene (120-12-7)			X									
4B. Benzidine (92-87-5)			X									
5B. Benzo ( <i>u</i> ) Anthracene (56-55-3)			X									
6B. Benzo ( <i>u</i> ) Pyrene (50-32-8)			X									
7B. 3,4-Benzo- fluoranthene (205-99-2)			X									
8B. Benzo ( <i>g,l</i> ) Perylene (191-24-2)			X									
9B. Benzo ( <i>k</i> ) Fluoranthene (207-08-9)			X									
10B. Bis (2-Chloro- <i>ethoxy) Methane (111-91-1)</i>			X									
11B. Bis (2-Chloro- <i>ethyl) Ether (111-44-4)</i>			X									
12B. Bis (2- <i>Chloro-<i>propyl</i>) Ether (102-80-1)</i>			X									
13B. Bis (2-Ethyl- hexyl) Phthalate (117-87-7)			X									
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X									
15B. Butyl Benzyl Phthalate (85-68-7)			X									
16B. 2-Chloro- naphthalene (91-58-7)			X									
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)			X									
18B. Chrysene (218-01-9)			X									
19B. Dibenzo ( <i>u,l</i> ) Anthracene (53-70-3)			X									
20B. 1,2-Dichloro- benzene (95-50-1)			X									
21B. 1,3-Di-chloro- benzene (541-73-1)			X									

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"	3. EFFLUENT			4. UNITS			5. INTAKE (optional)				
		a. TESTING REQUIRED	b. BELOWED PRESENT	c. BELOWED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	d. NO. OF ANALYSES	a. CONCEN- TRATION (1) MASS	b. MASS (2) MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION (2) MASS	b. NO. OF ANALYSES
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)</b>												
22B 1,4-Dichloro-benzene (106-46-7)		X										
23B 3,3-Dichloro-benzidine (91-94-1)		X										
24B Diethyl Phthalate (84-66-2)		X										
25B Dimethyl Phthalate (131-11-3)		X										
26B Di-N-Butyl Phthalate (84-74-2)		X										
27B 2,4-Dinitrotoluene (121-14-2)		X										
28B 2,6-Dinitrotoluene (606-20-2)		X										
29B Di-N-Octyl Phthalate (117-84-0)		X										
30B 1,2-Diphenyl-hydrazine (as Azo-benzene) (122-66-7)		X										
31B Fluoranthene (206-44-0)		X										
32B Fluorene (86-73-7)		X										
33B Hexachlorobenzene (118-74-1)		X										
34B Hexachlorobutadiene (87-68-3)		X										
35B Hexachlorocyclopentadiene (77-47-4)		X										
36B Hexachloroethane (67-72-1)		X										
37B Indeno (1,2,3-cd) Pyrene (193-39-5)		X										
38B Isophorone (78-59-1)		X										
39B Naphthalene (91-20-3)		X										
40B Nitrobenzene (98-95-3)		X										
41B N-Nitrosodimethylamine (62-75-9)		X										
42B N-Nitrosodi-N-Propylamine (621-64-7)		X										

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
	a. TESTING REQUIRED	b. PRESENT	c. BELIEVED PRESENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	d. NO. OF ANALYSES (1) (2) MASS	e. CONCEN-TRATION (1) MASS	f. NO. OF ANALYSES (2) MASS	a. LONG TERM AVERAGE VALUE (1) MASS	b. NO. OF ANALYSES (2) MASS
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)</b>											
43B N-Nitrosodiphenylamine (86-30-6)			X								
44B Phenanthrene (85-01-8)			X								
45B Pyrene (129-00-0)			X								
46B 1,2,4-Tri-chlorobenzene (120-82-1)			X								
<b>GC/MS FRACTION - PESTICIDES</b>											
1P Aldrin (309-00-2)											
2P $\alpha$ -BHC (319-84-6)											
3P $\beta$ -BHC (319-85-7)											
4P $\gamma$ -BHC (58-89-9)											
5P $\delta$ -BHC (319-86-8)											
6P Chlordane (57-74-9)											
7P 4,4'-DDT (50-29-3)											
8P 4,4'-DDE (72-55-9)											
9P 4,4'-DDD (72-54-8)											
10P Dieldrin (60-57-1)											
11P $\alpha$ -Endosulfan (115-29-7)											
12P $\beta$ -Endosulfan (115-29-7)											
13P Endosulfan Sulfate (1031-07-8)											
14P Endrin (72-20-8)											
15P Endrin Aldehyde (7421-93-4)											
16P Heptachlor (76-44-8)											

	EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
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CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE <i>(optional)</i>	
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE <i>(if available)</i>	b. MAXIMUM 30 DAY VALUE <i>(if available)</i>	c. LONG TERM AVRG. VALUE <i>(if available)</i>	d. NO. OF ANALYSES	a. CONCEN- TRATION <sup>(1)</sup> (2) MASS CONCENTRATION
<b>GC/MS FRACTION - PESTICIDES <i>(continued)</i></b>								
17P Heptachlor Epoxyde (1024-57-3)								
18P PCB-1242 (53469-21-9)								
19P PCB-1254 (11097-69-1)								
20P PCB-1221 (11104-28-2)								
21P PCB-1232 (11141-16-5)								
22P PCB-1248 (12672-28-6)								
23P PCB-1260 (11096-82-5)								
24P PCB-1016 (12674-11-2)								
25P Toxaphene (8001-35-2)								



PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages.

EPA I.D. NUMBER (copy from Item 1 of Form 1)

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT AND CAS NO. (if available)	2. EFFLUENT		3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. MAXIMUM DAILY VALUE CONCENTRATION (1) MASS (2)	b. MAXIMUM 30 DAY VALUE (if available) CONCENTRATION (1) MASS (2)	c. LONG TERM AVRG. VALUE (if available) CONCENTRATION (1) MASS (2)	d. NO. OF ANALYSES	a. CONCEN- TRATION (1) MASS	b. NO. OF ANALYSES		
a. Biochemical Oxygen Demand (BOD)								
b. Chemical Oxygen Demand (COD)								
c. Total Organic Carbon (TOC)								
d. Total Suspended Solids (TSS)								
e. Ammonia (as N)								
f. Flow	VALUE 10 , 500	VALUE 10 , 500	VALUE 10 , 500	VALUE	VALUE	VALUE		
g. Temperature (winter)	VALUE	VALUE	VALUE	VALUE	°C	VALUE		
h. Temperature (summer)	VALUE 26 . 9	VALUE 26 . 9	VALUE 26 . 9	VALUE 1	°C 1	VALUE 1		
i. pH	MINIMUM 7 . 91	MAXIMUM 8 . 47	MINIMUM 7 . 91	MAXIMUM 8 . 47	STANDARD UNITS			
PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.								
2. MARK "X"		3. EFFLUENT		4. UNITS				
1. POLLUTANT AND CAS NO. (if available)	a. BELOVED PRESENT ABSENT	b. MAXIMUM DAILY VALUE CONCENTRATION (1) MASS (2)	b. MAXIMUM 30 DAY VALUE (if available) CONCENTRATION (1) MASS (2)	c. LONG TERM AVRG. VALUE (if available) CONCENTRATION (1) MASS (2)	d. NO. OF ANALYSES	e. LONG TERM AVERAGE VALUE (1) MASS (2)		
a. Bromide (24959-67-9)	X							
b. Chlorine, Total Residual	X							
c. Color	X							
d. Fecal Coliform	X							
e. Fluoride (16984-88-8)	X							
f. Nitrate-Nitrite (as N)	X							
PART C - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.								
5. INTAKE (optional)								
1. POLLUTANT AND CAS NO. (if available)	a. BELOVED PRESENT ABSENT	b. MAXIMUM DAILY VALUE CONCENTRATION (1) MASS (2)	b. NO. OF ANALYSES	a. CONCEN- TRATION (1) MASS	b. CONCEN- TRATION (1) MASS	b. NO. OF ANALYSES		
RECEIVED SEP 27 2011 Ohio Environmental Protection Agency Southeast District Office Continued on reverse								

## ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)		2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)			
a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVERAGE VALUE (if available) (1) CONCENTRATION	d. LONG TERM AVERAGE VALUE (if available) (2) MASS	e. CONCEN-TRATION (1) CONCENTRATION	f. CONCEN-TRATION (2) MASS	a. CONCEN-TRATION (1) CONCENTRATION	b. CONCEN-TRATION (2) MASS	a. CONCEN-TRATION (1) CONCENTRATION	b. CONCEN-TRATION (2) MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	b. LONG TERM AVERAGE VALUE (2) MASS	b. NO OF ANALYSES	b. NO OF ANALYSES
g. Nitrogen, Total Organic (as N)	X														
h. Oil and Grease	X														
i. Phosphorus (as P), Total (7723-14-0)	X	0 . 028								1	mg/L	1bs.			
j. Radioactivity															
(1) Alpha, Total	X														
(2) Beta, Total	X														
(3) Radium, Total	X														
(4) Radium 226, Total	X														
k. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		54 90							1	mg/L	1bs.			
l. Sulfide (as S)	X														
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)	X														
n. Surfactants	X														
o. Aluminum, Total (7429-90-5)	X	0 . 41								1	mg/L	1bs.			
p. Barium, Total (7440-39-3)	X	0 . 07								1	mg/L	1bs.			
q. Boron, Total (7440-42-8)	X	0 . 523								1	mg/L	1bs.			
r. Cobalt, Total (7440-48-4)	X														
s. Iron, Total (7439-89-6)	X	1 . 52													
t. Magnesium, Total (7439-55-4)	X														
u. Molybdenum, Total (7439-98-7)	X														
v. Manganese, Total (7439-26-5)	X	2 . 35													
w. Tin, Total (7440-31-5)	X														
x. Titanium, Total (7440-32-6)	X														

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (copy from Item 1 of Form 1) **OUTFALL NUMBER**

**CONTINUED FROM PAGE 3 OF FORM 2-C**

**PART C -** If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GCMS fractions you must test for. Mark "X" in column 2-a for all such GCMS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and *nonrequired* GC/M/S fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"			3. EFFLUENT			4. UNITS			5. INTAKE <i>(optional)</i>			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE <sup>(1)</sup> CONCENTRATION	b. MAXIMUM 30 DAY VALUE <i>(if unavailable)</i> <sup>(1)</sup> CONCENTRATION	c. LONG TERM AVRG. VALUE <i>(if available)</i> <sup>(1)</sup> CONCENTRATION	d. NO. OF ANALYSES	a. CONCENTRATION <sup>(2)</sup> MASS	b. MASS	a. CONCENTRATION <sup>(1)</sup> MASS	b. NO. OF ANALYSES	a. LONG TERM AVERAGE VALUE <sup>(1)</sup> MASS	b. MASS
1M. Antimony, Total (7440-36-0)	X	X	X										
2M. Arsenic, Total (7440-38-2)	X	X	X	0.0008									
3M. Beryllium, Total (7440-41-7)	X	X	X										
4M. Cadmium, Total (7440-43-9)	X	X	X	0.07									
5M. Chromium, Total (7440-47-3)	X	X	X	0.037									
6M. Copper, Total (7440-50-8)	X	X	X	0.005									
7M. Lead, Total (7439-92-1)	X	X	X										
8M. Mercury, Total (7439-97-6)	X	X	X	1.88									
9M. Nickel, Total (7440-02-0)	X	X	X	0.04									
10M. Selenium, Total (7782-49-2)	X	X	X	0.0008									
11M. Silver, Total (7440-22-4)	X	X	X										
12M. Thallium, Total (7440-28-0)	X	X	X										
13M. Zinc, Total (7440-66-6)	X	X	X	0.010									
14M. Cyanide, Total (57-12-5)	X	X	X										
15M. Phenols, Total	X	X	X										
DIOXIN													
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)													
<b>DESCRIBE RESULTS</b>													

CONTINUE ON PERVERSE

CONTINIE ON REVERSE

## CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'	3. EFFLUENT			4. UNITS			5. INTAKE (optional)				
		a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVG. VALUE (if available) (1) CONCENTRATION	d. NO. OF ANALYSES	a. CONCEN- TRATION (1) MASS	b. MASS CONCENTRATION (2) MASS	a. LONG TERM AVERAGE VALUE (1) MASS	b. NO. OF ANALYSES
<b>GC/MS FRACTION - VOLATILE COMPOUNDS</b>												
1V Acrolein (107-02-8)	X											
2V Acrylonitrile (107-13-1)		X										
3V Benzene (71-43-2)		X										
4V Bis (Chloro- methyle) Ether (542-88-1)		X										
5V Bromoform (75-25-2)		X										
6V Carbon Tetrachloride (56-23-5)		X										
7V Chlorobenzene (108-90-7)		X										
8V Chlorodi- bromomethane (124-48-1)		X										
9V Chloroethane (75-00-3)		X										
10V 2-Chloro- ethylvinyl Ether (110-75-8)		X										
11V Chloroform (67-66-3)		X										
12V Dichloro- bromomethane (75-27-4)		X										
13V Dichloro- difluoromethane (75-71-8)		X										
14V 1,1-Dichloro- ethane (75-34-3)		X										
15V 1,2-Dichloro- ethane (107-06-2)		X										
16V 1,1-Dichloro- ethylene (75-35-4)		X										
17V 1,2-Dichloro- propane (78-87-5)		X										
18V 1,3-Dichloro- propylene (542-75-6)		X										
19V Ethylbenzene (100-41-4)		X										
20V Methyl Bromide (74-83-9)		X										
21V Methyl Chloride (74-87-3)		X										

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT			4. UNITS			5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELOVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVERG. VALUE (if available) (1) CONCENTRATION	d. NO. OF ANALYSES (2) MASS	e. CONCEN- TRATION (1) MASS	f. MASS (2) MASS	g. LONG TERM AVERAGE VALUE (1) MASS	h. NO. OF ANALYSES (2) MASS
<b>GC/MS FRACTION – VOLATILE COMPOUNDS (continued)</b>											
22V Methylene Chloride (75-09-2)			X								
23V 1,1,2,2-Tetrachloroethane (79-34-5)			X								
24V Tetrachloroethylene (127-18-4)			X								
25V Toluene (108-88-3)			X								
26V 1,2-Trans-Dichloroethylene (156-60-5)			X								
27V 1,1,1-Trichloroethane (71-55-6)			X								
28V 1,1,2-Trichloroethane (79-00-5)			X								
29V Trichloroethylene (79-01-6)			X								
30V Trichlorofluoromethane (75-69-4)			X								
31V Vinyl Chloride (75-01-4)			X								
<b>GC/MS FRACTION – ACID COMPOUNDS</b>											
1A 2-Chlorophenol (95-57-8)			X								
2A 2,4-Dichlorophenol (120-83-2)			X								
3A 2,4-Dimethylphenol (105-67-9)			X								
4A 4,6-Dinitro-O-Cresol (534-52-1)			X								
5A 2,4-Dinitrophenol (51-28-5)			X								
6A 2-Nitrophenol (88-75-5)			X								
7A 4-Nitrophenol (100-02-7)			X								
8A P-Chloro-M-Cresol (59-50-7)			X								
9A Pentachlorophenol (87-86-5)			X								
10A Phenol (108-95-2)			X								
11A 2,4,6-Trichlorophenol (88-05-2)			X								

## CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT			4. UNITS			5. INTAKE <i>(optional)</i>			
	a TESTING REQUIRED	b BELOWED PRESENT	c BELOWED ABSENT	a MAXIMUM DAILY VALUE (1) CONCENTRATION	b MAXIMUM 30 DAY VALUE (if available) (2) MASS CONCENTRATION	c LONG TERM AVRG. VALUE <i>(if available)</i> (1) MASS CONCENTRATION	a CONCEN- TRATION	b MASS	a CONCEN- TRATION	b MASS	a LONG TERM AVERAGE VALUE (1) MASS CONCENTRATION	b NO OF ANALYSES
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS</b>												
1B. Acenaphthene (83-32-9)		X										
2B. Acenaphthylene (208-96-8)		X										
3B. Anthracene (120-12-7)		X										
4B. Benzidine (92-87-5)		X										
5B. Benzo <i>(a)</i> Anthracene (56-55-3)		X										
6B. Benzo <i>(a)</i> Pyrene (50-32-8)		X										
7B. 3,4-Benzo- fluoranthene (205-99-2)		X										
8B. Benzo <i>(g,h)</i> Perylene (191-24-2)		X										
9B. Benzo <i>(k)</i> Fluoranthene (207-08-9)		X										
10B. Bis <i>(2-Chloro-o-</i> <i>cthoxy)</i> Methane (111-91-1)		X										
11B. Bis <i>(2-Chloro-o-</i> <i>cthy)</i> Ether (111-44-4)		X										
12B. Bis <i>(2-</i> <i>Chloro-<i>propyl</i>)</i> Ether (102-80-1)		X										
13B. Bis <i>(2-Ethyl-<i>hexyl</i>)</i> Phthalate (117-81-7)		X										
14B. 4-Bromophenyl Phenyl Ether (101-55-3)		X										
15B. Butyl Benzyl Phthalate (85-68-7)		X										
16B. 2-Chloro- naphthalene (91-58-7)		X										
17B. 4-Chloro- phenyl Phenyl Ether (7005-72-3)		X										
18B. Chrysene (218-01-9)		X										
19B. Dibenzo <i>(a,i)</i> Anthracene (53-70-3)		X										
20B. 1,2-Dichloro- benzene (95-50-1)		X										
21B. 1,3-Dichloro- benzene (641-73-1)		X										

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE ( <i>if present</i> )		
	a TESTING REQUIRED	b BELOVED PRESENT	c BELOVED ABSENT	a MAXIMUM DAILY VALUE (1) CONCENTRATION	b MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	c LONG TERM AVRG. VALUE <i>(if available)</i> (1)	d NO. OF ANALYSES (2) MASS	a CONCEN- TRATION (1) MASS	a LONG TERM AVERAGE VALUE (1) MASS
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS <i>(continued)</i></b>									
22B. 1,4-Dichloro-benzene (106-46-7)		X							
23B. 3,3-Dichloro-benzidine (91-94-1)		X							
24B. Diethyl Phthalate (84-66-2)		X							
25B. Dimethyl Phthalate (131-11-3)		X							
26B. Di-N-Butyl Phthalate (84-74-2)		X							
27B. 2,4-Dinitrotoluene (121-14-2)		X							
28B. 2,6-Dinitro-toluene (606-20-2)		X							
29B. Di-N-Octyl Phthalate (117-84-0)		X							
30B. 1,2-Diphenyl-hydrazine (as 20-benzene) (122-66-7)		X							
31B. Fluoranthene (206-44-0)		X							
32B. Fluorene (86-73-7)		X							
33B. Hexachlorobenzene (118-74-1)		X							
34B. Hexachlorobutadiene (87-68-3)		X							
35B. Hexachlorocyclopentadiene (77-47-4)		X							
36B. Hexachloroethane (67-72-1)		X							
37B. Indeno (1,2,3- <i>cd</i> ) Pyrene (193-39-5)		X							
38B. Isophorone (78-59-1)		X							
39B. Naphthalene (91-20-3)		X							
40B. Nitrobenzene (98-95-3)		X							
41B. N-Nitrosodimethylamine (62-75-9)		X							
42B. N-Nitrosodi-N-Propylamine (621-64-7)		X							

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>				2. MARK "X"				3. EFFLUENT				5. INTAKE <i>(optional)</i>			
GC/MS FRACTION	a TESTING REQUIRED	b PRESENT	c BELIEVED ABSENT	a MAXIMUM DAILY VALUE <i>(if available)</i>		b MAXIMUM 30 DAY VALUE <i>(if available)</i>		c LONG TERM AVRG. VALUE <i>(if available)</i>		d NO. OF ANALYSES		a LONG TERM AVERAGE VALUE <i>(1)</i>		b NO. OF ANALYSES <i>(2)</i>	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	a CONCEN- TRATION	b MASS	a CONCEN- TRATION	b MASS	a CONCEN- TRATION	b MASS
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS <i>(continued)</i></b>															
43B. N-Nitro-sodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Tri-chlorobenzene (120-82-1)				X											
<b>GC/MS FRACTION - PESTICIDES</b>															
1P. Aldrin (309-00-2)															
2P. $\alpha$ -BHC (319-84-6)															
3P. $\beta$ -BHC (319-85-7)															
4P. $\gamma$ -BHC (58-89-9)															
5P. $\delta$ -BHC (319-86-8)															
6P. Chlordane (57-74-9)															
7P. 4,4'-DDT (50-29-3)															
8P. 4,4'-DDE (72-55-9)															
9P. 4,4'-DDD (72-54-8)															
10P. Dieldrin (60-57-1)															
11P. $\alpha$ -Endosulfan (115-29-7)															
12P. $\beta$ -Endosulfan (115-29-7)															
13P. Endosulfan Sulfaie (1031-07-8)															
14P. Endrin (72-20-8)															
15P. Endrin Aldehyde (7421-33-4)															
16P. Heptachlor (76-44-8)															

CONTINUED FROM PAGE V-8										
EPA I.D. NUMBER (copy from Item 1 of Form I)										
OUTFALL NUMBER										

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"	3. EFFLUENT			4. UNITS			5. INTAKE (optional)			
		a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE ( <sup>1</sup> )	b. MAXIMUM 30 DAY VALUE ( <sup>1</sup> if available)	c. LONG TERM AVRG. VALUE ( <sup>1</sup> if available)	d. NO. OF ANALYSES ( <sup>1</sup> )	a. CONCEN- TRATION ( <sup>1</sup> )	b. MASS CONCENTRATION ( <sup>1</sup> )	a. LONG TERM AVG. VALUE ( <sup>1</sup> )
<b>GC/MS FRACTION - PESTICIDES (continued)</b>											
17P Heptachlor Epoxide (1024-57-3)											
18P PCB-1242 (53469-21-9)											
19P PCB-1254 (11097-69-1)											
20P PCB-1221 (11104-28-2)											
21P PCB-1232 (11141-16-5)											
22P PCB-1248 (12672-29-6)											
23P PCB-1260 (11096-32-5)											
24P PCB-1016 (12674-11-2)											
25P Toxaphene (8001-35-2)											



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SEP 27 2010

**MURRAY ENERGY CORPORATION**  
**Permit Renewal Sample Summary**

Ohio Environmental  
Protection Agency  
Southeast District

Company:	AEC					
Source:	Pond 002					
Analysis Number:	1005468	1005544	10005545	1006099	1006190	
			Duplicate			

**PARAMETER**

Flow	GPD	39,300	10,800	10,800	43,200	28,200
Temperature, Field	°C	24.1	22.2	22.2	26.1	24.9
pH, Field	S.U.	8.21	8.09	8.09	8.21	8.06
Chloride	mg/L	550	1500	1500	1600	1500
Total Hardness	mg/L	246	263	265	212	225
Hexavalent Chromium	mg/L	ND	0.010	0.005	ND	ND
Nitrate + Nitrite	mg/L	ND	ND	ND	ND	ND
Oil & Grease	mg/L	ND	ND	ND	ND	ND
Total Phosphorus	mg/L	0.028	0.026	0.025	0.027	0.034
Total Dissolved Solids	mg/L	4920	4990	5120	5180	4726
Total Kjeldahl Nitrogen (as N)	mg/L	ND	ND	ND	ND	0.46
Sulfate (as SO <sub>4</sub> )	mg/L	1160	1310	1280	1310	1130
Total Aluminum	mg/L	0.11	0.04	0.04	0.18	0.10
Total Organic Nitrogen	mg/L	ND	ND	ND	ND	0.46
Total Arsenic	mg/L	0.0006	ND	ND	0.0009	0.0008
Total Barium	mg/L	0.05	0.03	0.04	0.06	0.08
Total Boron	mg/L	0.488	ND	0.225	0.446	0.274
Total Cadmium	mg/L	0.015	0.015	0.012	0.008	0.01
Total Chromium	mg/L	0.02	0.01	0.01	ND	0.009
Total Copper	mg/L	ND	ND	ND	ND	ND
Total Iron	mg/L	0.17	0.22	0.22	0.27	0.36
Total Lead	mg/L	ND	ND	ND	ND	ND
Total Manganese	mg/L	0.04	0.04	0.04	0.05	0.135
Total Nickel	mg/L	ND	0.02	ND	ND	ND
Total Selenium	mg/L	ND	0.0004	0.0008	0.0007	0.0009
Total Strontium	mg/L	4.56	4.58	4.60	5.69	4.25
Total Zinc	mg/L	0.015	0.015	0.009	0.011	0.01
Mercury (Low-Level)	ng/L	1.08	2.27	1.71	1.06	1.25

**METALS BY ICP-MS**

Thallium	mg/L	ND	ND	ND	ND	ND
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**SEMOVOLATILE ORGANIC COMPOUNDS**

Acenaphthene	mg/L	ND	ND	ND	ND	ND
Acenaphthylene	mg/L	ND	ND	ND	ND	ND
Anthracene	mg/L	ND	ND	ND	ND	ND
Benzo(a)anthracene	mg/L	ND	ND	ND	ND	ND
Benzo(a)pyrene	mg/L	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	mg/L	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	mg/L	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	mg/L	ND	ND	ND	ND	ND
Chrysene	mg/L	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	mg/L	ND	ND	ND	ND	ND

**MURRAY ENERGY CORPORATION**  
**Permit Renewal Sample Summary**

Company:	AEC
Source:	Pond 002
Analysis Number:	1005468    1005544    10005545    1006099    1006190 Duplicate

**PARAMETER**

Fluoranthene	mg/L	ND	ND	ND	ND	ND
Fluorene	mg/L	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	mg/L	ND	ND	ND	ND	ND
Naphthalene	mg/L	ND	ND	ND	ND	ND
Phenanthrene	mg/L	ND	ND	ND	ND	ND
Pyrene	mg/L	ND	ND	ND	ND	ND
Surr: Nitrobenzene-d5	%REC	61.3	81.4	85.2	73.7	74.5
Surr: 2-Fluorobiphenyl	%REC	56.2	79.7	82.1	76.3	71.9
Surr: 4-Terphenyl-d14	%REC	52.9	59.5	63.2	59.0	63.3

**VOLATILE ORGANIC COMPOUNDS**

Benzene	μg/L	ND	ND	ND	ND	ND
Toluene	μg/L	ND	ND	ND	ND	ND
Ethylbenzene	μg/L	ND	ND	ND	ND	ND
m,p-Xylene	μg/L	ND	ND	ND	ND	ND
o-Xylene	μg/L	ND	ND	ND	ND	ND
Naphthalene	μg/L	ND	ND	ND	ND	ND
Surr: 1,2-Dichloroethane-d4	%REC	76.7	67.9	74.4	106	89.7
Surr: 4-Bromofluorobenzene	%REC				109	104
Surr: Dibromofluoromethane	%REC				106	97.7
Surr: Toluene-d8	%REC				97.4	97.9

**PHENOLICS**

Phenolics	mg/L	ND	ND	ND	ND	ND
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**MURRAY ENERGY CORPORATION**  
**Permit Renewal Sample Summary**

SEP 27 2010

Company:	AEC	Ohio Environmental Protection Agency Southeast District				
Source:	Pond 008					
Analysis Number:	1005469	1005472	1005546	1006063	1006064	1006098
		Duplicate			Duplicate	

PARAMETER						
Flow	GPD	101,500	101,500	98,250	102,500	102,500
Temperature, Field	°C	27.5	27.5	23.9	24.8	24.8
pH, Field	S.U.	8.61	8.61	8.23	8.21	8.21
Chloride	mg/L	550	230	590	680	680
Total Hardness	mg/L	637	658	840	662	662
Hexavalent Chromium	mg/L	ND	ND	0.005	0.004	0.004
Nitrate + Nitrite	mg/L	ND	ND	ND	ND	ND
Oil & Grease	mg/L	ND	ND	ND	ND	ND
Total Phosphorus	mg/L	0.051	0.052	0.022	0.046	0.046
Total Dissolved Solids	mg/L	7370	7380	7770	8550	8550
Total Kjeldahl Nitrogen (as N)	mg/L	0.49	ND	0.39	0.48	0.48
Sulfate (as SO <sub>4</sub> )	mg/L	4100	4280	4530	4730	4730
Total Aluminum	mg/L	0.15	0.15	1.35	0.35	0.35
Total Organic Nitrogen	mg/L	0.49	ND	0.39	0.48	0.48
Total Arsenic	mg/L	0.0006	0.0006	ND	0.0010	0.0009
Total Barium	mg/L	0.04	0.04	0.03	ND	ND
Total Boron	mg/L	0.477	0.466	0.190	0.596	0.720
Total Cadmium	mg/L	0.023	0.025	0.021	0.06	0.05
Total Chromium	mg/L	0.03	0.03	0.02	0.031	0.032
Total Copper	mg/L	ND	ND	ND	ND	ND
Total Iron	mg/L	0.12	0.14	0.13	0.26	0.26
Total Lead	mg/L	ND	ND	ND	ND	0.016
Total Manganese	mg/L	0.27	0.27	0.24	0.24	0.24
Total Nickel	mg/L	ND	ND	ND	ND	ND
Total Selenium	mg/L	0.0005	0.0009	0.0008	0.0005	0.0004
Total Strontium	mg/L	5.16	4.91	6.66	7.60	7.66
Total Zinc	mg/L	ND	ND	ND	ND	ND
Mercury (Low-Level)	ng/L	<0.5	0.57	2.71	1.11	1.05
<b><u>METALS BY ICP-MS</u></b>						
Thallium	mg/L	0.0002	0.0002	ND	ND	ND
<b><u>SEMOVOLATILE ORGANIC COMPOUNDS</u></b>						
Acenaphthene	mg/L	ND	ND	ND	ND	ND
Acenaphthylene	mg/L	ND	ND	ND	ND	ND
Anthracene	mg/L	ND	ND	ND	ND	ND
Benzo(a)anthracene	mg/L	ND	ND	ND	ND	ND
Benzo(a)pyrene	mg/L	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	mg/L	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	mg/L	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	mg/L	ND	ND	ND	ND	ND
Chrysene	mg/L	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	mg/L	ND	ND	ND	ND	ND

**MURRAY ENERGY CORPORATION**  
**Permit Renewal Sample Summary**

Company:	AEC	1005469	1005472	1005546	1006063	1006064	1006098
Source:	Pond 008						
Analysis Number:		Duplicate				Duplicate	

PARAMETER							
Fluoranthene	mg/L	ND	ND	ND	ND	ND	ND
Fluorene	mg/L	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	mg/L	ND	ND	ND	ND	ND	ND
Naphthalene	mg/L	ND	ND	ND	ND	ND	ND
Phenanthrene	mg/L	ND	ND	ND	ND	ND	ND
Pyrene	mg/L	ND	ND	ND	ND	ND	ND
Surr: Nitrobenzene-d5	%REC	60.5	60.8	82.7	87.4	85.9	76.2
Surr: 2-Fluorobiphenyl	%REC	57.2	62.2	79.7	79.1	78.1	76.5
Surr: 4-Terphenyl-d14	%REC	48.5	49.2	54.0	59.7	60.1	52.3
<b><u>VOLATILE ORGANIC COMPOUNDS</u></b>							
Benzene	µg/L	ND	ND	ND	ND	ND	ND
Toluene	µg/L	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/L	ND	ND	ND	ND	ND	ND
m,p-Xylene	µg/L	ND	ND	ND	ND	ND	ND
o-Xylene	µg/L	ND	ND	ND	ND	ND	ND
Naphthalene	µg/L	ND	ND	ND	ND	ND	ND
Surr: 1,2-Dichloroethane-d4	%REC	81.2	79.3	73.0	97.5	96.6	109
Surr: 4-Bromofluorobenzene	%REC				103	103	107
Surr: Dibromofluoromethane	%REC				98.0	99.3	106
Surr: Toluene-d8	%REC				96.4	95.6	96.0
<b><u>PHENOLICS</u></b>							
Phenolics	mg/L	ND	ND	ND	ND	ND	ND

RECEIVED

MURRAY ENERGY CORPORATION  
Permit Renewal Sample Summary

SEP 27 2010

Company: AEC  
Source: Pond 011  
Analysis Number: 1005471 1005548 1006065 1006100

Ohio Environmental  
Protection Agency  
Southeast District

PARAMETER

Flow	GPD	52,000	38,500	36,500	37,250
Temperature, Field	°C	22.8	22.5	24.3	26.1
pH, Field	S.U.	7.95	8.06	8.37	8.48
Chloride	mg/L	32	30	32	36
Total Hardness	mg/L	162	169	168	168
Hexavalent Chromium	mg/L	0.006	0.010	ND	ND
Nitrate + Nitrite	mg/L	0.150	0.110	ND	ND
Oil & Grease	mg/L	ND	ND	ND	ND
Total Phosphorus	mg/L	0.044	0.026	0.036	0.031
Total Dissolved Solids	mg/L	330	312	323	334
Total Kjeldahl Nitrogen (as N)	mg/L	ND	ND	ND	ND
Sulfate (as SO <sub>4</sub> )	mg/L	65.7	70.7	76.8	83.1
Total Aluminum	mg/L	0.34	0.17	0.39	0.08
Total Organic Nitrogen	mg/L	0.150	0.11	ND	ND
Total Arsenic	mg/L	0.0009	0.0006	0.0013	0.0016
Total Barium	mg/L	0.09	0.07	0.05	0.09
Total Boron	mg/L	0.057	0.065	0.620	0.082
Total Cadmium	mg/L	0.010	0.006	0.04	ND
Total Chromium	mg/L	0.01	0.01	0.018	0.013
Total Copper	mg/L	ND	ND	ND	ND
Total Iron	mg/L	0.37	0.20	0.18	0.19
Total Lead	mg/L	ND	ND	ND	ND
Total Manganese	mg/L	0.11	0.50	0.08	0.09
Total Nickel	mg/L	ND	ND	ND	ND
Total Selenium	mg/L	ND	0.0003	0.0001	0.0007
Total Strontium	mg/L	0.413	0.443	0.500	0.518
Total Zinc	mg/L	ND	0.002	ND	ND
Mercury (Low-Level)	ng/L	1.01	0.96	2.39	0.91

METALS BY ICP-MS

Thallium	mg/L	ND	ND	ND	ND
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SEMIVOLATILE ORGANIC COMPOUNDS

Acenaphthene	mg/L	ND	ND	ND	ND
Acenaphthylene	mg/L	ND	ND	ND	ND
Anthracene	mg/L	ND	ND	ND	ND
Benzo(a)anthracene	mg/L	ND	ND	ND	ND
Benzo(a)pyrene	mg/L	ND	ND	ND	ND
Benzo(b)fluoranthene	mg/L	ND	ND	ND	ND
Benzo(g,h,i)perylene	mg/L	ND	ND	ND	ND
Benzo(k)fluoranthene	mg/L	ND	ND	ND	ND
Chrysene	mg/L	ND	ND	ND	ND
Dibenzo(a,h)anthracene	mg/L	ND	ND	ND	ND

**MURRAY ENERGY CORPORATION**  
**Permit Renewal Sample Summary**

Company:	AEC
Source:	Pond 011
Analysis Number:	1005471    1005548    1006065    1006100

**PARAMETER**

Fluoranthene	mg/L	ND	ND	ND	ND
Fluorene	mg/L	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	mg/L	ND	ND	ND	ND
Naphthalene	mg/L	ND	ND	ND	ND
Phenanthrene	mg/L	ND	ND	ND	ND
Pyrene	mg/L	ND	ND	ND	ND
Surr: Nitrobenzene-d5	%REC	62.3	86.9	87.1	78.9
Surr: 2-Fluorobiphenyl	%REC	63.2	83.6	82.2	79.5
Surr: 4-Terphenyl-d14	%REC	57.4	64.7	69.7	62.8

**VOLATILE ORGANIC COMPOUNDS**

Benzene	µg/L	ND	ND	ND	ND
Toluene	µg/L	ND	ND	ND	ND
Ethylbenzene	µg/L	ND	ND	ND	ND
m,p-Xylene	µg/L	ND	ND	ND	ND
o-Xylene	µg/L	ND	ND	ND	ND
Naphthalene	µg/L	ND	ND	ND	ND
Surr: 1,2-Dichloroethane-d4	%REC	81.6	57.6	88.8	102
Surr: 4-Bromofluorobenzene	%REC			105	106
Surr: Dibromofluoromethane	%REC			94.4	101
Surr: Toluene-d8	%REC			99.9	101

**PHENOLICS**

Phenolics	mg/L	ND	ND	ND	ND
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RECEIVED

**MURRAY ENERGY CORPORATION**  
**Permit Renewal Sample Summary**

SEP 27 2010

Company:	AEC					Ohio Environmental Protection Agency <i>Scifield</i>
Source:	Pond 015					
Analysis Number:	1005470	1005547	1006066	1006286	1006291	Duplicate

**PARAMETER**

Flow	GPD	5,400	5,760	2,250	10,500	10,500
Temperature, Field	°C	26.9	25.6	23.6	24.1	24.1
pH, Field	S.U.	8.47	8.24	8.47	7.91	7.91
Chloride	mg/L	200	220	240	120	120
Total Hardness	mg/L	523	574	490	675	633
Hexavalent Chromium	mg/L	0.007	0.005	0.003	ND	ND
Nitrate + Nitrite	mg/L	ND	ND	ND	ND	ND
Oil & Grease	mg/L	ND	ND	ND	ND	ND
Total Phosphorus	mg/L	0.028	0.025	0.018	0.010	0.010
Total Dissolved Solids	mg/L	8090	8430	9070	6660	6540
Total Kjeldahl Nitrogen (as N)	mg/L	ND	ND	ND	ND	ND
Sulfate (as SO <sub>4</sub> )	mg/L	4530	4930	5490	3980	4100
Total Aluminum	mg/L	0.41	0.26	ND	0.14	0.10
Total Organic Nitrogen	mg/L	ND	ND	ND	ND	ND
Total Arsenic	mg/L	0.0007	0.0002	0.0008	0.0006	0.0004
Total Barium	mg/L	0.03	0.02	0.02	0.07	0.07
Total Boron	mg/L	0.523	0.100	0.118	0.476	0.518
Total Cadmium	mg/L	0.024	0.021	0.07	0.02	0.01
Total Chromium	mg/L	0.02	0.02	0.028	0.035	0.037
Total Copper	mg/L	ND	ND	ND	0.004	0.005
Total Iron	mg/L	0.93	1.52	1.4	1.45	1.28
Total Lead	mg/L	ND	ND	ND	ND	ND
Total Manganese	mg/L	0.52	0.05	0.31	2.35	1.99
Total Nickel	mg/L	ND	ND	ND	0.04	0.04
Total Selenium	mg/L	ND	0.0002	0.0003	0.0008	0.0007
Total Strontium	mg/L	3.41	3.76	4.51	373	3.65
Total Zinc	mg/L	ND	0.010	ND	0.01	0.01
Mercury (Low-Level)	ng/L	0.62	1.88	1.15	1.77	1.74

**METALS BY ICP-MS**

Thallium	mg/L	ND	ND	ND	ND	ND
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**SEMOVOLATILE ORGANIC COMPOUNDS**

Acenaphthene	mg/L	ND	ND	ND	ND	ND
Acenaphthylene	mg/L	ND	ND	ND	ND	ND
Anthracene	mg/L	ND	ND	ND	ND	ND
Benzo(a)anthracene	mg/L	ND	ND	ND	ND	ND
Benzo(a)pyrene	mg/L	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	mg/L	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	mg/L	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	mg/L	ND	ND	ND	ND	ND
Chrysene	mg/L	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	mg/L	ND	ND	ND	ND	ND

**MURRAY ENERGY CORPORATION**  
**Permit Renewal Sample Summary**

Company:	AEC
Source:	Pond 015
Analysis Number:	1005470    1005547    1006066    1006286    1006291 Duplicate

**PARAMETER**

Fluoranthene	mg/L	ND	ND	ND	ND	ND
Fluorene	mg/L	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	mg/L	ND	ND	ND	ND	ND
Naphthalene	mg/L	ND	ND	ND	ND	ND
Phenanthrene	mg/L	ND	ND	ND	ND	ND
Pyrene	mg/L	ND	ND	ND	ND	ND
Surr: Nitrobenzene-d5	%REC	61.8	81.7	82.8	95.9	89.5
Surr: 2-Fluorobiphenyl	%REC	63.6	80.6	76.9	81.2	77.5
Surr: 4-Terphenyl-d14	%REC	41.2	49.0	60.3	44.2	46.4

**VOLATILE ORGANIC COMPOUNDS**

Benzene	µg/L	ND	ND	ND	ND	ND
Toluene	µg/L	ND	ND	ND	ND	ND
Ethylbenzene	µg/L	ND	ND	ND	ND	ND
m,p-Xylene	µg/L	ND	ND	ND	ND	ND
o-Xylene	µg/L	ND	ND	ND	ND	ND
Naphthalene	µg/L	ND	ND	ND	ND	ND
Surr: 1,2-Dichloroethane-d4	%REC	75.5	73.7	106	101	101
Surr: 4-Bromofluorobenzene	%REC			108	105	105
Surr: Dibromofluoromethane	%REC			103	102.0	102
Surr: Toluene-d8	%REC			99.6	98.2	94.2

**PHENOLICS**

Phenolics	mg/L	ND	ND	ND	ND	ND
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# TRADET LABORATORIES

P.O. Box 2019  
Wheeling, WV 26003-0219

Phone: (304) 233-9060  
Fax: (304) 233-9063

Shipping Address: 8 Industrial Park Drive  
Wheeling, WV 26003

## LABORATORY ANALYSES

Ohio Valley Coal Company  
56854 Pleasant Ridge Road  
Alledonia, OH 43902  
Attn: Katie Wood

15-Oct-09

By: William Snyder  
TraDet, Inc.

Company:	Ohio Valley Coal Company	Sampled By:	QES (KW)
Source:	8 Series	Date & Time Sampled:	09-24-09 1115
Analysis Number:	0909641	Date & Time Received:	09-24-09 1703

PARAMETER	CONCENTRATION	DATE & TIME ANALYZED	ANALYST	METHOD	PQL		
Total Suspended Solids	24	mg/L	09-26-09 0800	MM/TW	2540D	[2]	10 mg/L
Total Dissolved Solids	7240	mg/L	09-26-09 0800	MM/TW	2540C	[2]	10 mg/L
Total Organic Carbon	2.95	mg/L	10-05-09 1526	REIC (DSA)	5310C	[2]	1.00 mg/L
Specific Conductance	9480	µmhos/cm	09-25-09 1530	LW	120.1	[3]	10 mg/L
Total Acidity	7.8	mg/L	09-28-09 0756	WB	2310B(4)	[2]	5 mg/L
Total Alkalinity	380	mg/L	09-29-09 0833	WB	2320B	[2]	5 mg/L
Chloride	547	mg/L	09-29-09 1459	REIC (CW)	300.0	[3]	100 mg/L
Nitrite*	ND	mg/L	09-29-09 1459	REIC (CW)	300.0	[3]	50.0 mg/L
Nitrate + Nitrite	ND	mg/L	10-01-09 1554	REIC (CW)	4110B	[2]	0.20 mg/L
Ammonia Nitrogen (as N)	0.15	mg/L	09-30-09 1444	REIC (BA)	350.1	[3]	0.10 mg/L
Sulfate (as SO <sub>4</sub> )	3550	mg/L	09-29-09 1459	REIC (CW)	300.0	[3]	500 mg/L
Mercury	<0.0005	mg/L	10-14-09 0922	BS	245.1	[3]	0.0005 mg/L
Arsenic	<0.001	mg/L	10-01-09 1344	BS	3114B4.d	[1]	0.001 mg/L
Cadmium	0.03	mg/L	09-29-09 0851	BS	3111B	[1]	0.02 mg/L

PQL: Practical Quantitation Limit

[1] Standard Methods, 18th Edition [2] Standard Methods, 20th Edition [3] US EPA [4] ASTM [5] EPA SW846



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P.O. Box 2019  
Wheeling, WV 26003-0219

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Fax: (304) 233-9063

Shipping Address: 8 Industrial Park Drive  
Wheeling, WV 26003

## LABORATORY ANALYSES

Ohio Valley Coal Company  
56854 Pleasant Ridge Road  
Alledonia, OH 43902  
Attn: Katie Wood

15-Oct-09

By: William Shrypn  
TraDet, Inc.

Company:	Ohio Valley Coal Company	Sampled By:	QES (KW)
Source:	Pond 11	Date & Time Sampled:	09-24-09 1110
Analysis Number:	0909642	Date & Time Received:	09-24-09 1703

PARAMETER	CONCENTRATION	DATE & TIME ANALYZED	ANALYST	METHOD	PQL			
Total Suspended Solids	19	mg/L	09-26-09 0800	MM/TW	2540D	[2]	10	mg/L
Total Dissolved Solids	2850	mg/L	09-26-09 0800	MM/TW	2540C	[2]	10	mg/L
Total Organic Carbon	3.95	mg/L	10-05-09 1526	REIC (DSA)	5310C	[2]	1.00	mg/L
Specific Conductance	4370	µmhos/cm	09-25-09 1530	LW	120.1	[3]	10	mg/L
Total Acidity	<5	mg/L	09-28-09 0756	WB	2310B(4)	[2]	5	mg/L
Total Alkalinity	190	mg/L	09-29-09 0833	WB	2320B	[2]	5	mg/L
Chloride	378	mg/L	09-29-09 1517	REIC (CW)	300.0	[3]	25.0	mg/L
Nitrite*	ND	mg/L	09-29-09 1517	REIC (CW)	300.0	[3]	12.5	mg/L
Nitrate + Nitrite	ND	mg/L	10-01-09 1041	REIC (CW)	4110B	[2]	0.10	mg/L
Ammonia Nitrogen (as N)	ND	mg/L	09-30-09 1445	REIC (BA)	350.1	[3]	0.10	mg/L
Sulfate (as SO <sub>4</sub> )	1010	mg/L	09-29-09 1517	REIC (CW)	300.0	[3]	125	mg/L
Mercury	<0.0005	mg/L	10-14-09 0922	BS	245.1	[3]	0.0005	mg/L
Arsenic	0.0020	mg/L	10-01-09 1344	BS	3114B4.d	[1]	0.001	mg/L
Cadmium	0.02	mg/L	09-29-09 0851	BS	3111B	[1]	0.02	mg/L

PQL: Practical Quantitation Limit

[1] Standard Methods, 18th Edition [2] Standard Methods, 20th Edition [3] US EPA [4] ASTM [5] EPA SW846